

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

FIGURE 1

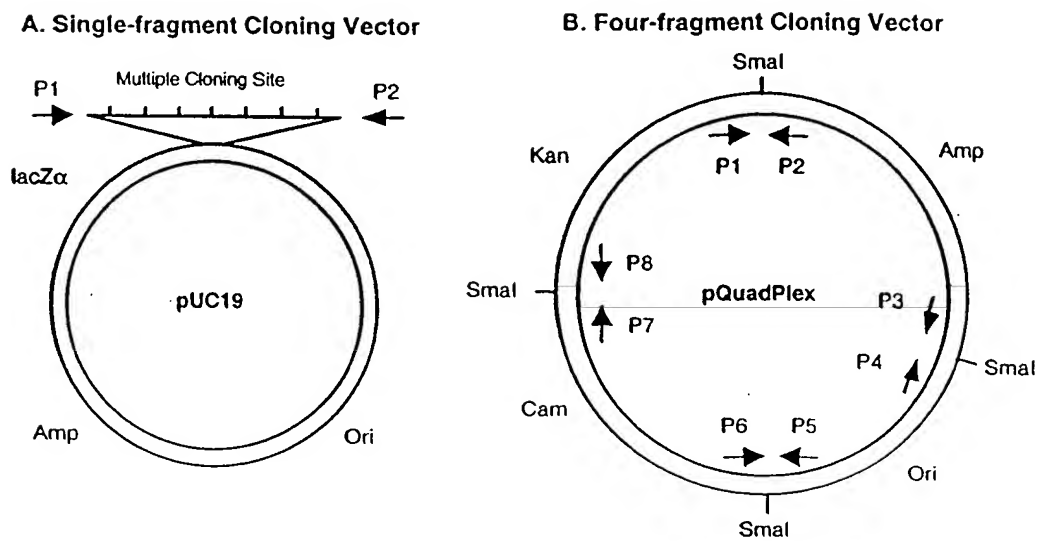


FIGURE 2

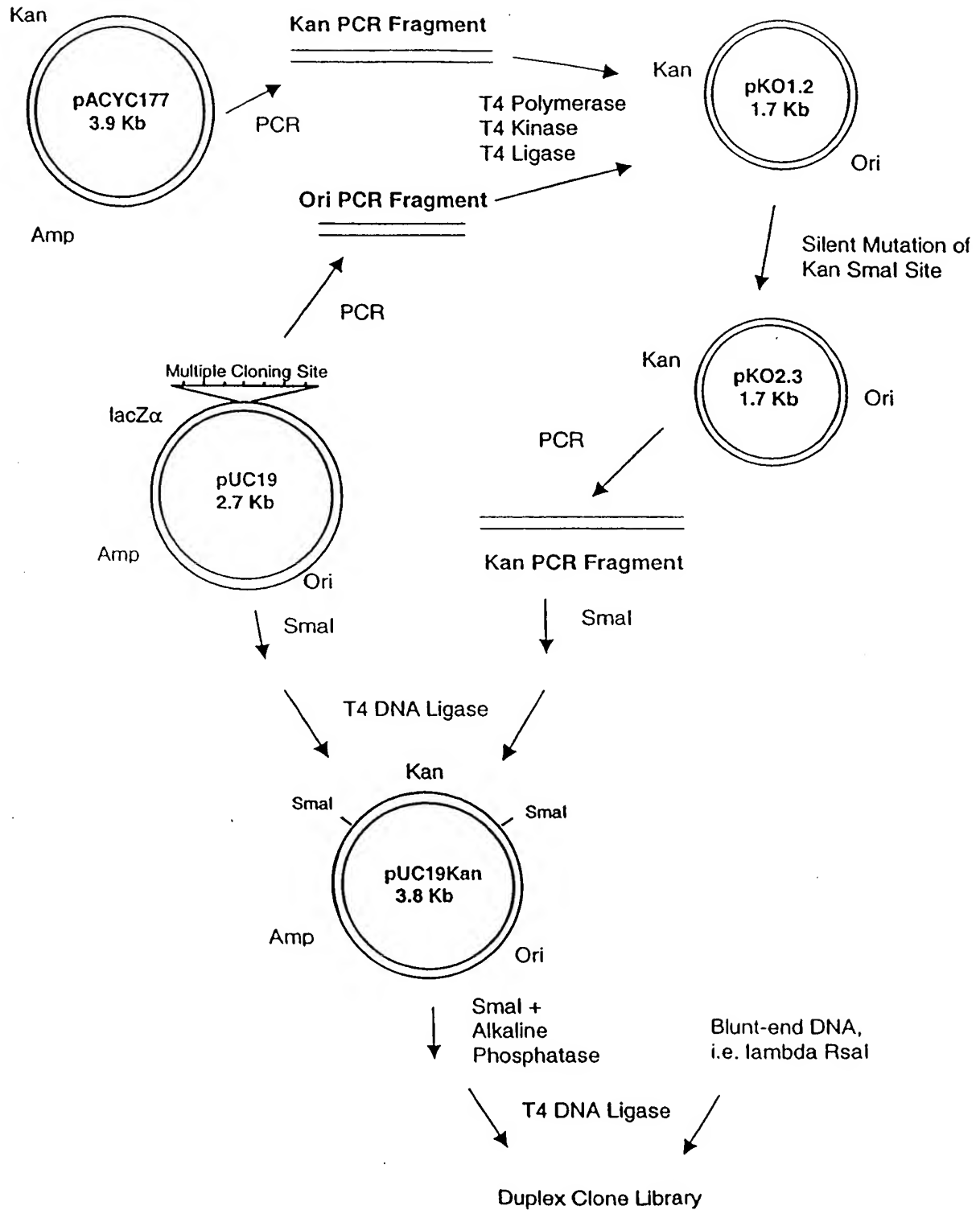


FIGURE 3

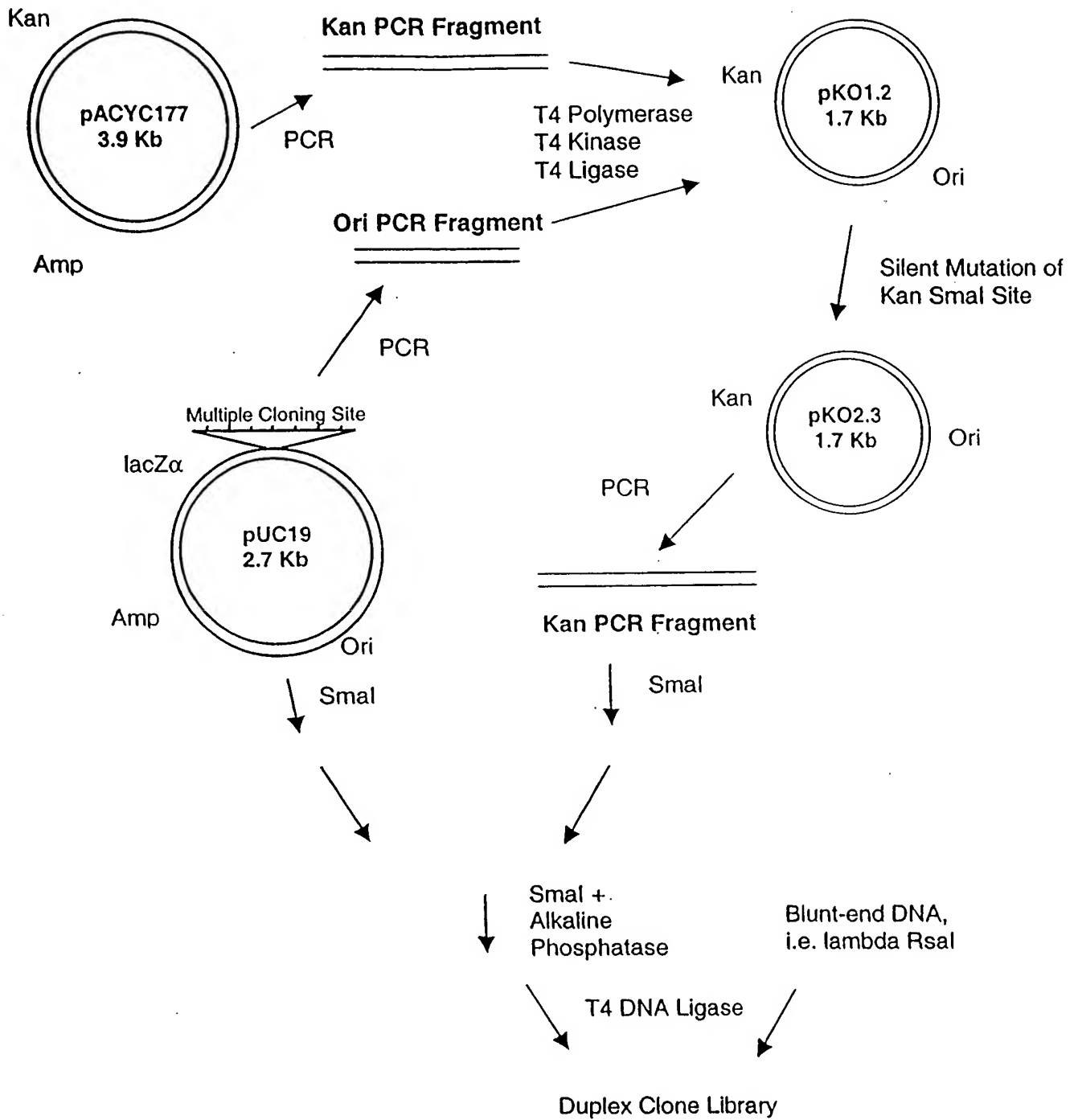


FIGURE 4

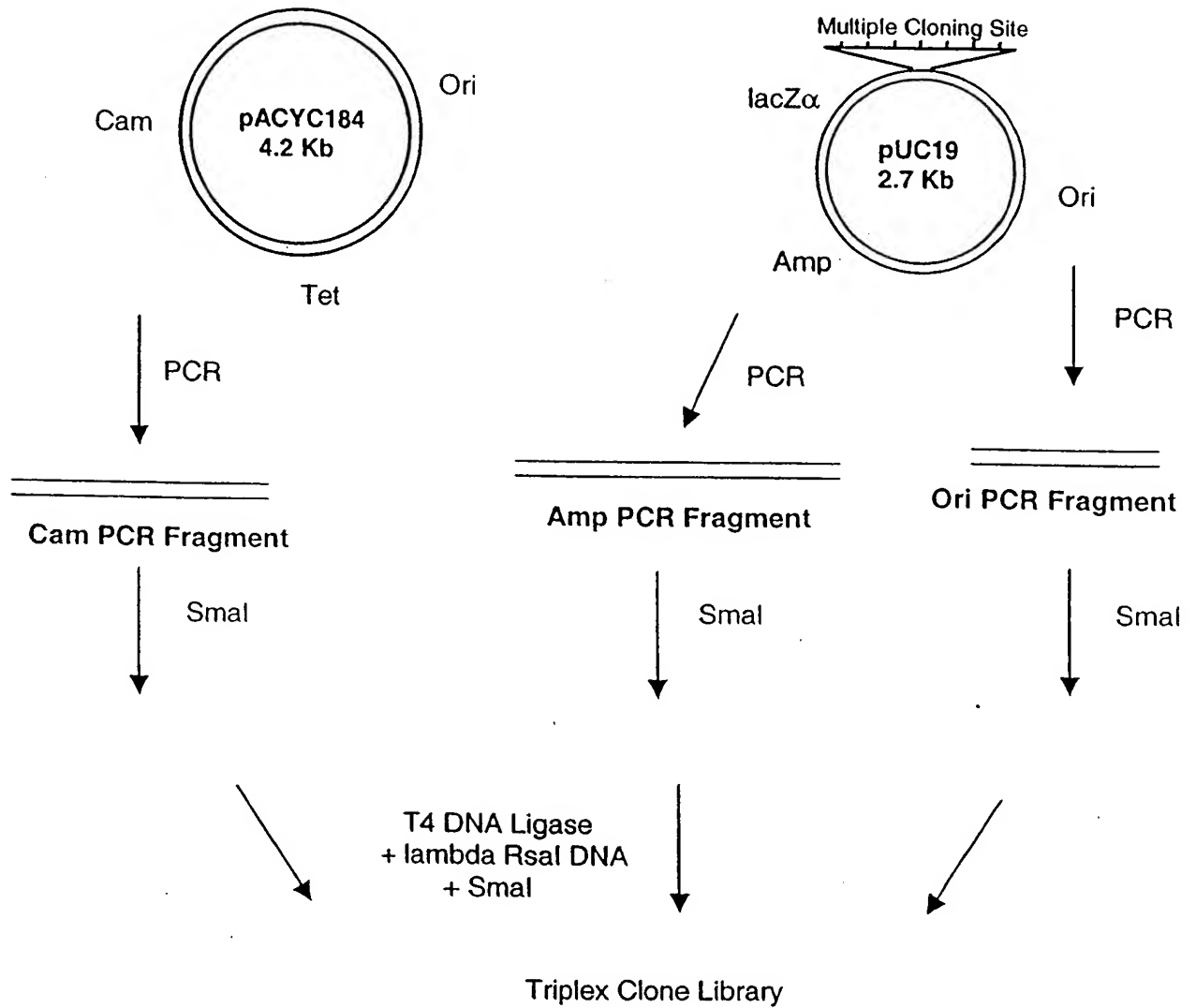


FIGURE 5

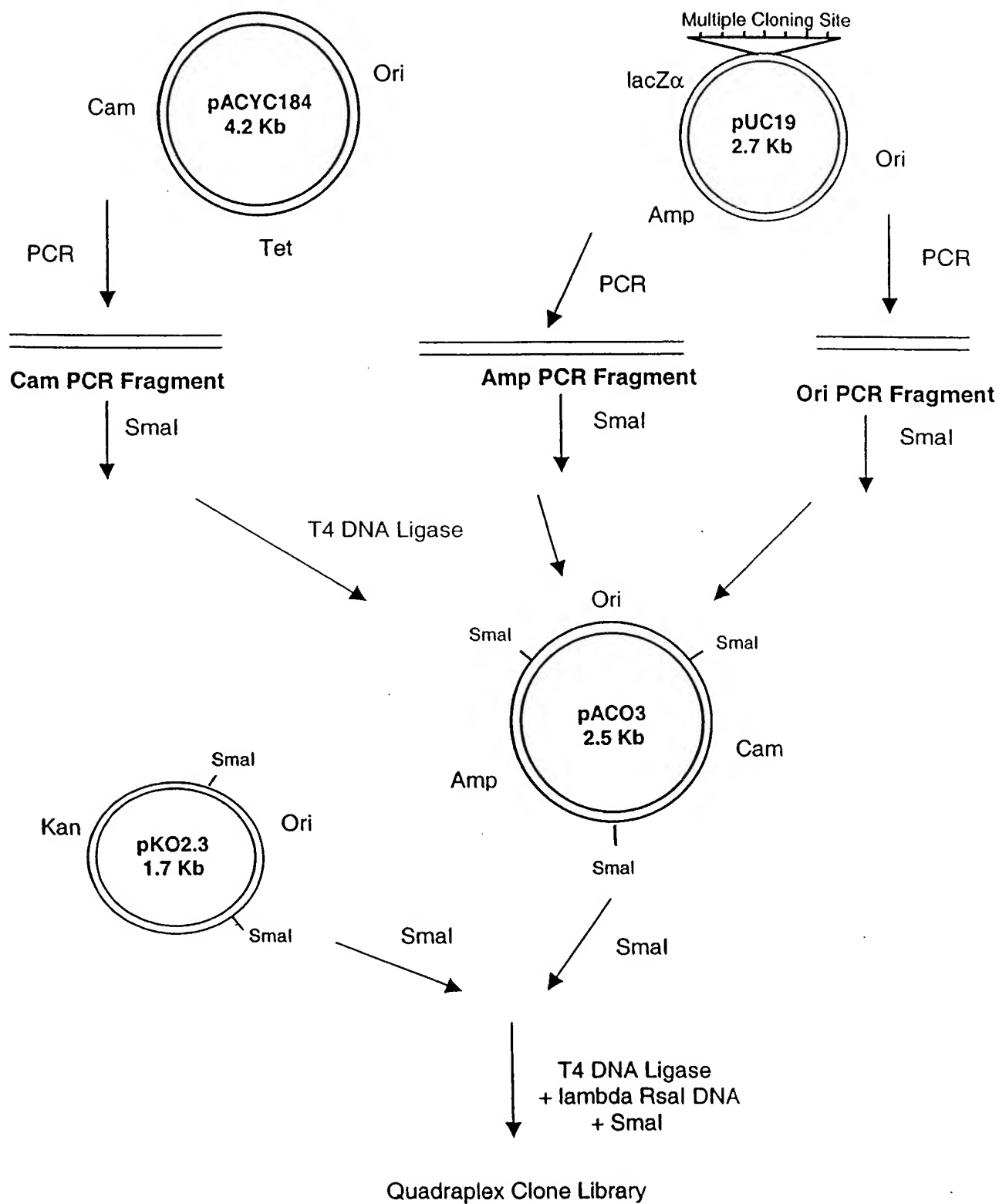


FIGURE 6

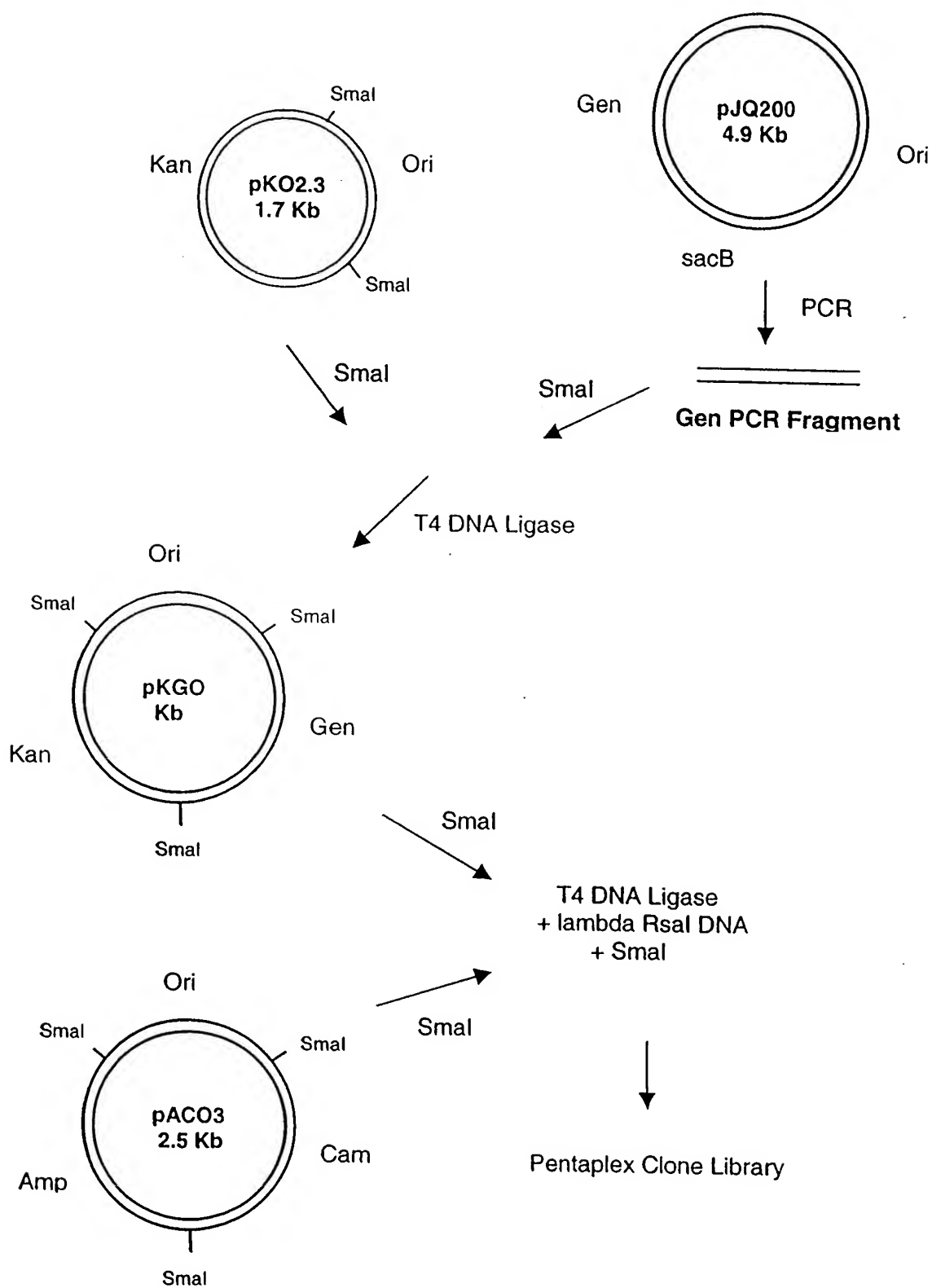


FIGURE 7

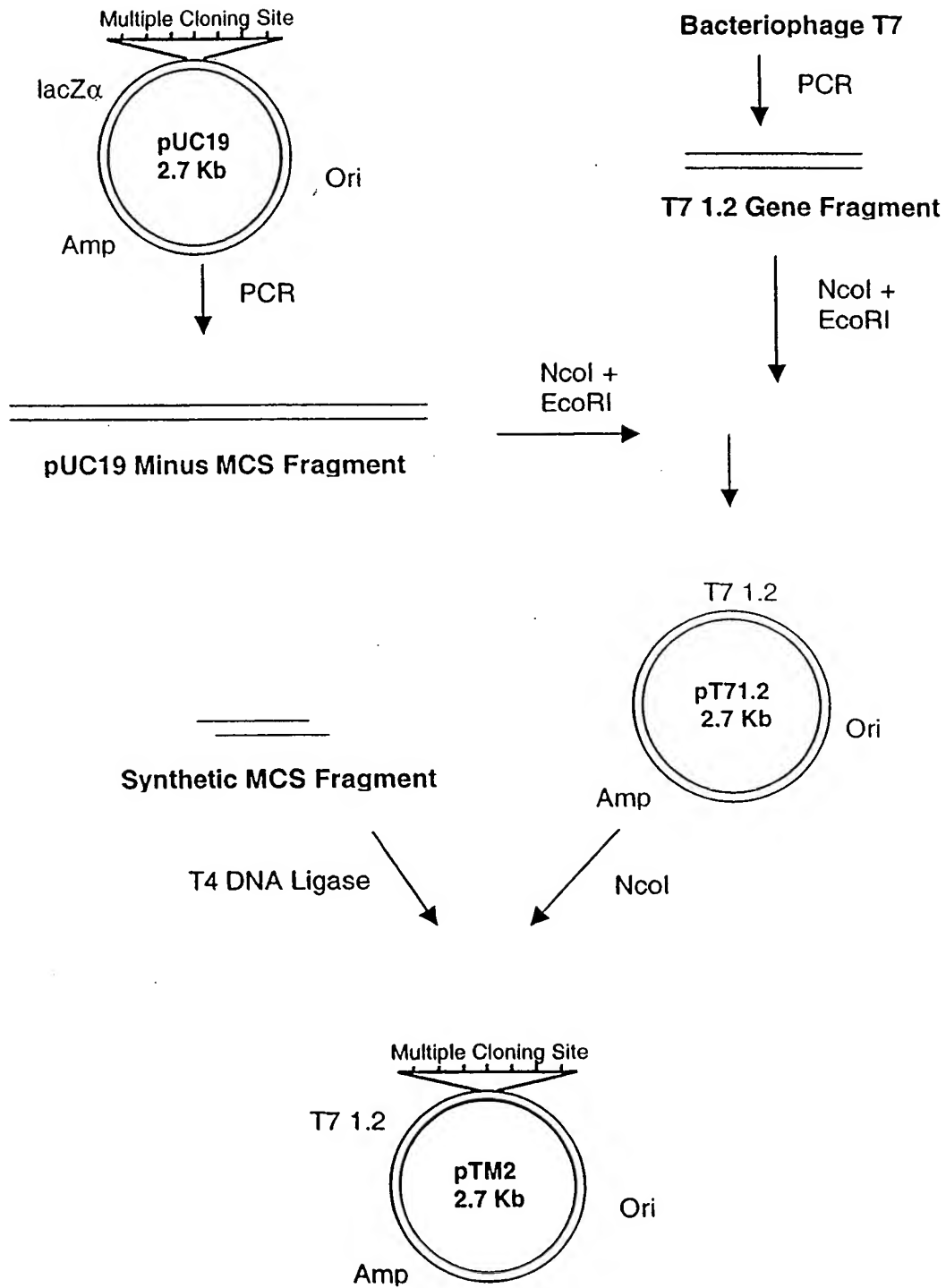


FIGURE 8

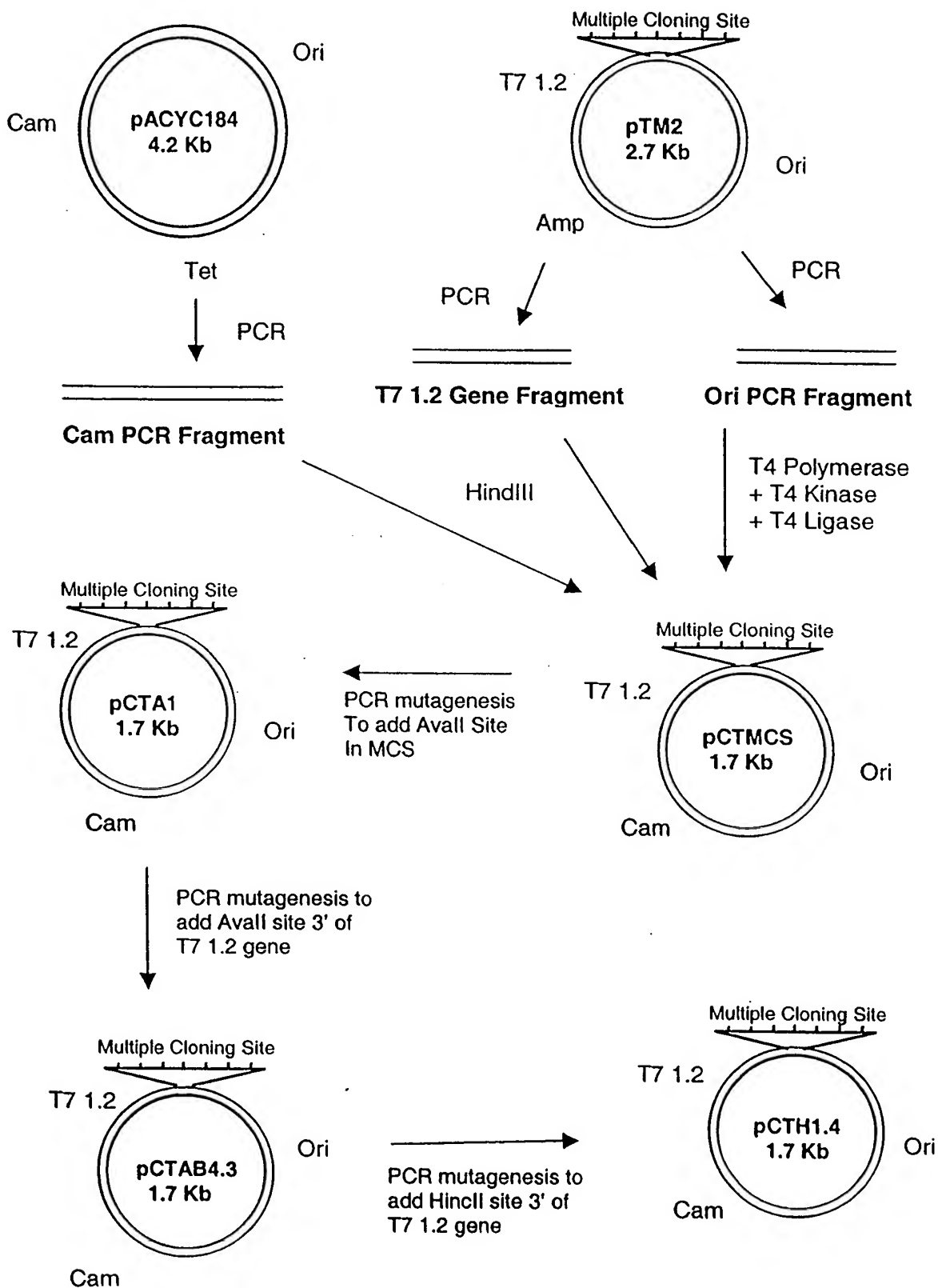


FIGURE 9

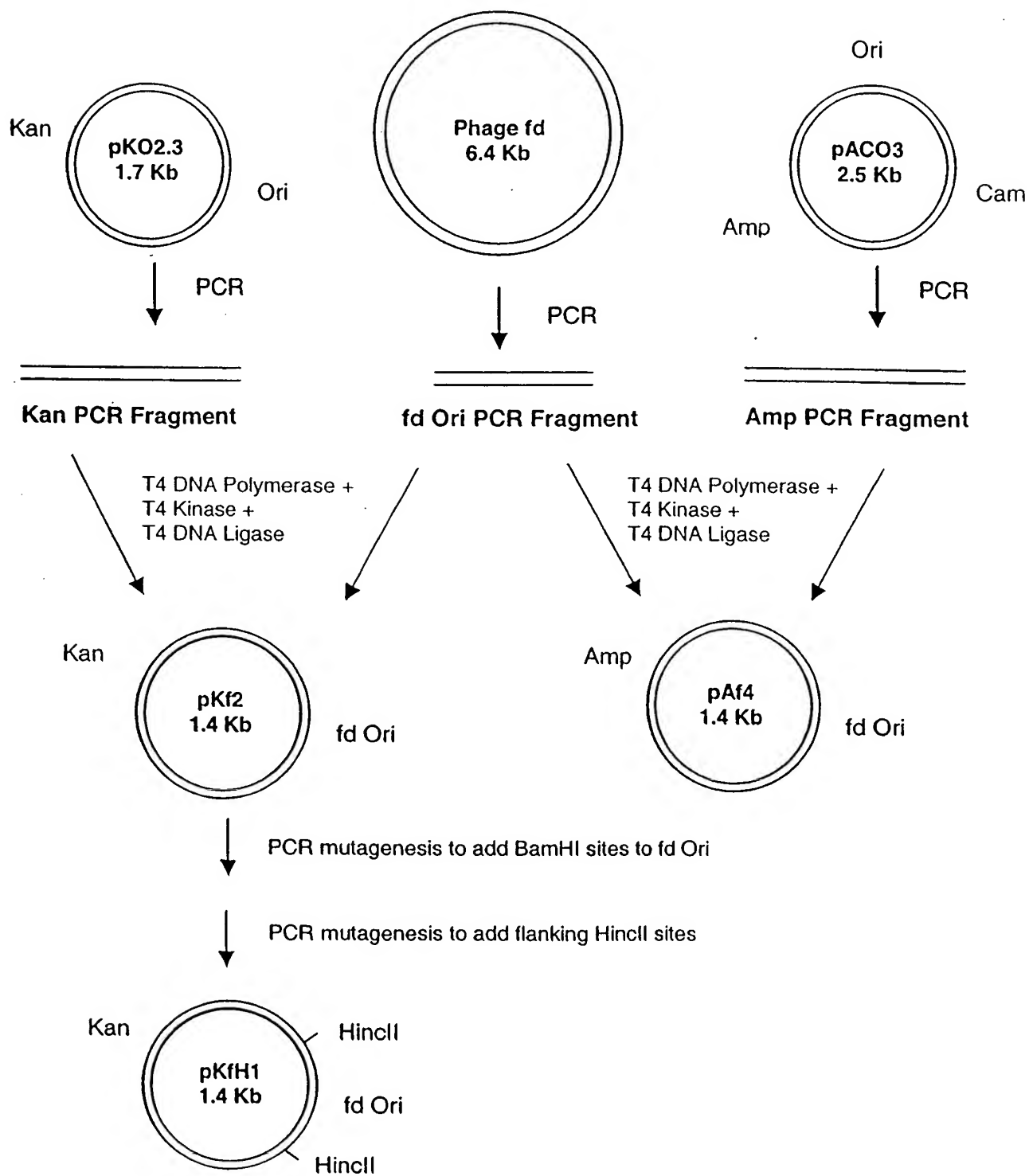


FIGURE 10

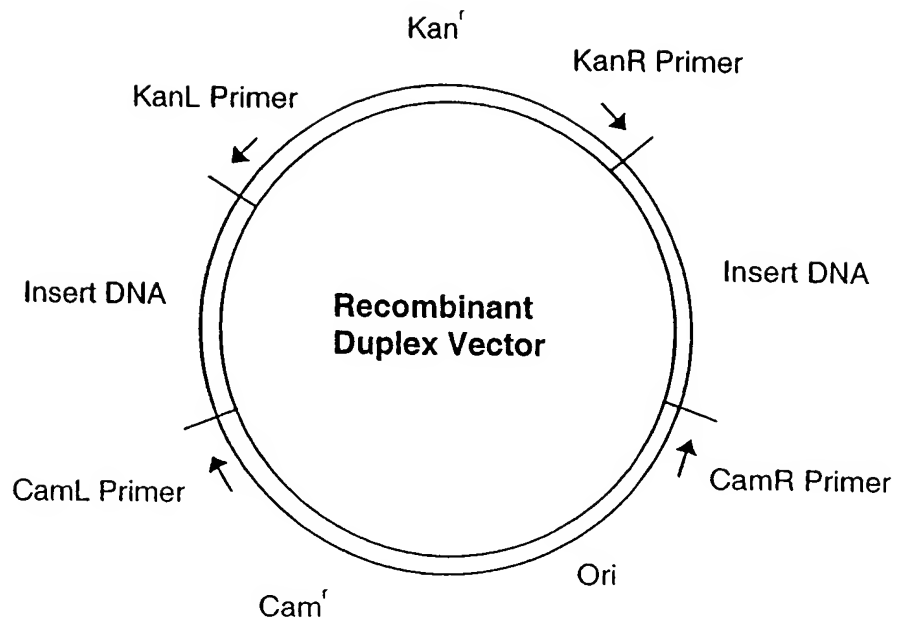
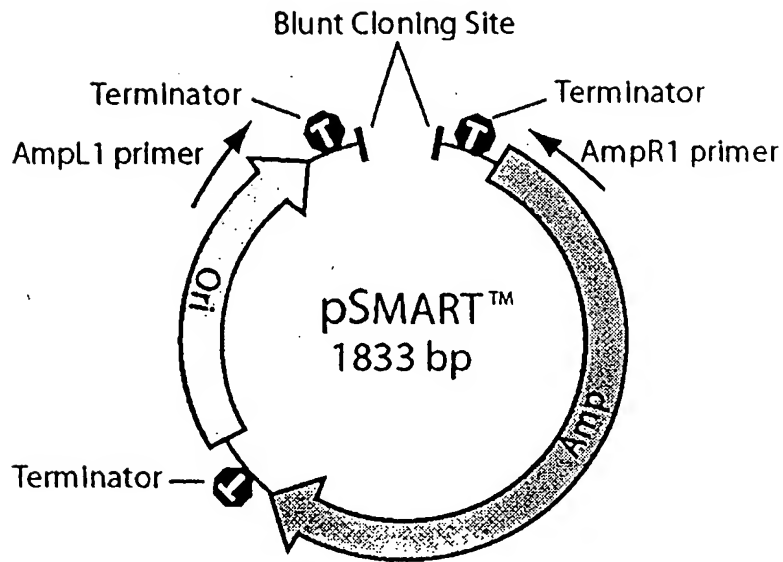


FIGURE 11 (SEQ ID NO:41)

TGATCGGCACGTAAGAGGTTCCAACCTTTCACCATAATGAAATAAGATCACTACCGGGCGTATTTTTTGGAGTTATCGAGAT
TTTCAGGAGCTAAGGAAGCTAAAATGGAGAAAAAAATCACTGGATATGCCACCGTTGATATATCCCAATGGCATCGTAAA
GAACATTTTGGAGGCATTTTCAGTCAGTTGCTCAATGTACCTATAACCAGACCGTTCAGCTGGATACTACGGCCTTTTAAA
GACCGTAAAGAAAAATAAGCACAAAGTTTTATCCGGCCTTTATTACATTCTTGCCCGCCTGATGAATGCTCATCCGGAAT
TCCGTATGGCAGTGAAAGACGGTGAGCTGGTGATATGGGATAGTGTTACACCTTGTTACACCGTTTTCATGAGCAAACCT
GAAACGTTTTTCATCGCTCTGGAGTGAATACCACGACGATTTCCGGCAGTTTCTACACATATATTCGCAAGATGTGGCGTG
TTACGGTGAAAACCTGGCCTATTTCCCTAAAGGGTTTATTGAGAATATGTTTTTCGTCTCAGCCAATCCCTGGGTGAGTT
TCACCAGTTTTGATTTAAACGTGGCCAATATGGACAACTTCTTCGCCCCCGTTTTACCATGGGCAATATTTATACGCAA
GGCGACAAGGTGCTGATGCCGCTGGCGATTTCAGGTTTCATCATGCCGTTTGTGATGGCTTCCATGTCGGCAGAATGCTTAA
TGAATTACAACAGTACTGCGATGAGTGGCAGGGCGGGCGTAAATGCAAAGCTTGTCATGCCTGCAGGTCGACTCTAGAGG
ACCGGGTACCGAGCTCAGATCTTAGCATGGGACGTTTATATAGTGGTAATCTGGCAGCATTCAGGCAGCAACAAACAAG
CTGTTCCAGTTAGACTTAGCGGTCATTTATGATGACTGGTATAATGCCTATACAAGAAAAAGATTGCATACGGTTACGTAT
TGAGGACAGATCTGGAAACCTGATTGATACTAGCACCTTCTACCACCACGACGAGGACGTTCTGTTCAATATGTGTACTG
ATTGGTTGAACCATATGTATGACCAGTTGAAGGACTGGAAGTAATAAGATCTTTGGTCCTGCAGGGAGCGTTAACATTTA
AATCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGA
AACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCCTGCCGCT
TACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGG
TGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACAT
CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTA
TGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTC
TGCTGAAGCCAGTTACCTTCGGAAGAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTT
TTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAGGATCGTTTGATCTTTTGGGCCC

FIGURE 12

A.



B.

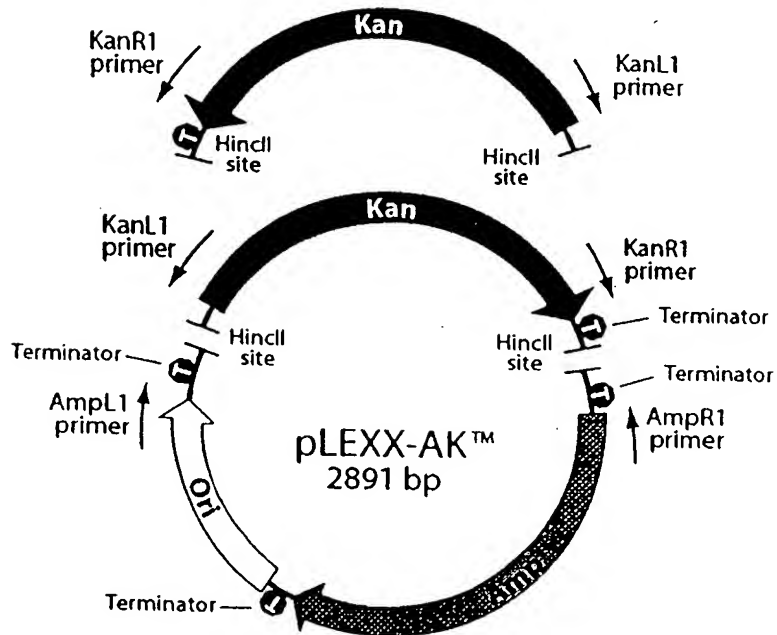
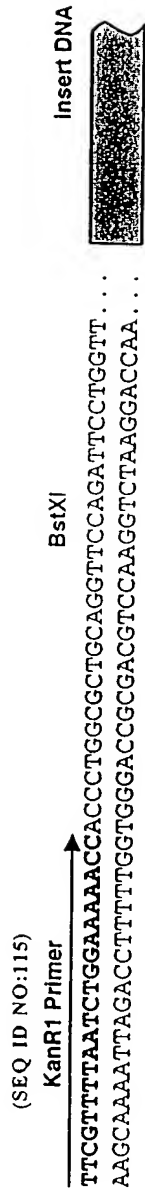
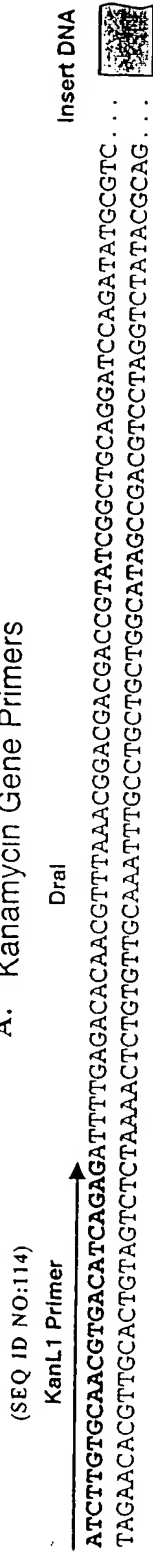


FIGURE 13

A. Kanamycin Gene Primers



B. Ampicillin Gene Primers

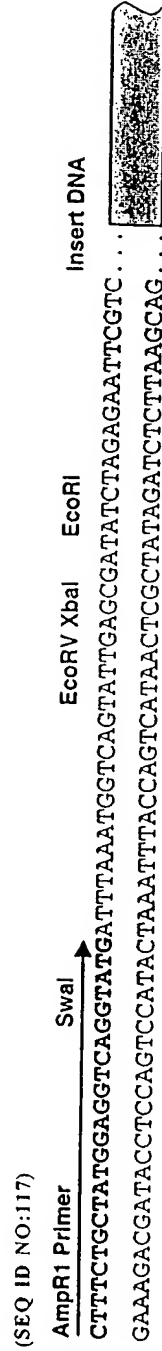
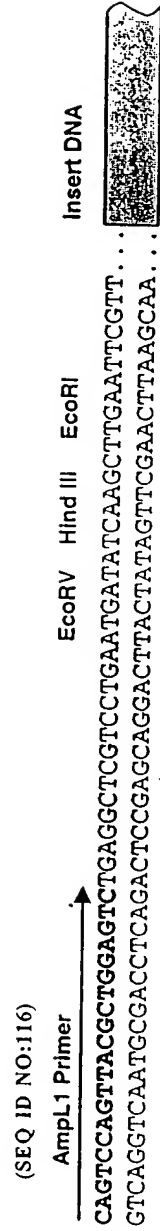


FIGURE 14

A. SEQ ID NO:85

GACGAATTCTCTAGATATCGCTCAATACTGACCATTTAAATCATACCTGA
CCTCCATAGCAGAAAGTCAAAAGCCTCCGACCGGAGGCTTTTGACTTGAT
CGGCACGTAAAGAGGTTCCAACCTTTCACCATAATGAAATAAGATCACTACC
GGGCGTATTTTTTGAGTTATCGAGATTTTCAGGAGCTAAGGAAGCTAAAA
TGAGTATTCAACATTTCCGTGTCGCCCTTATTCCTTTTTTGCGGCATTT
TGCCTTCCTGTTTTTGCTCACCAGAAACGCTGGTGAAAGTAAAGATGC
TGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACA
GCGGTAAGATCCTTGAGAGTTTACGCCCCGAAGAACGTTTTCCAATGATG
AGCAC'TTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATTGACGC
CGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACTTGG
TTGAGTACTCACCAGTCACAGAAAAGCATCTCACGGATGGCATGACAGTA
AGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAA
CTTACTTCTGGCAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGC
ACAACATGGGGGATCATGTAACCTCGCCTTGATCGTTGGGAACCGGAGCTG
AATGAAGCCATACCAAACGACGAGCGTGACACCACGATGCCTGTAGCAAT
GGCAACAACGTTGCGCAAACTATTAACCTGGCGAACTACTTACTCTAGCTT
CCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGATCA
CTTCTGCGCTCGGCCCTCCCGCTGGCTGGTTTATTGTGTGATAAATCTGG
AGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATG
GTAAGCCCTCCCGCATCGTAGTTATCTACACGACGGGGAGTCAGGCAACT
ATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAA
GCATTGGTAATGAGGGCCAAATGTAATCACCTGGCTCACCTTCGGGTGG
GCCTTCTGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAG
CATCACAAAAATCGATGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACT
ATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTG
TTCCGACCCTGCGCTTACCAGGATACCTGTCCGCCTTCTCCCTTCGGGA
AGCGTGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTA
GGTCGTTGCTTCAAGCTGGGCTGTGTGCACGAACCCCCCGTTACGCCG
ACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGA
CACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGC
GAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACG
GCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTT
ACCTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCT
GGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAA
AGGATCTCAAGAAGATCCTTTGATTTTCTACCGAAGAAAGGCCACCCGT
GAAGGTGAGCCAGTGAGTTGATTGCAGTCCAGTTACGCTGGAGTCTGAGG
CTCGTCTGAATGATATCAAGCTTGAATTCGTT

B. SEQ ID NO: 86

GACGCATATCTGGATCCTGCAGCCGATACGGTCGTCGTCGGTTTAAACGTTGTGTCTCAAAATCTCTGATG
TCACGTTGCACAAGATAAAAAATATATCATCATGAACAATAAAACCGTCTGCTTACATAAACAGTAATACAA
GGGGTGTTATGAGCCATATTCAACGGGAACGTCCTTGCTCGAGGCCGCGATTAAATTCCAACATGGATGCT
GATTTATATGGGTATAAATGGGCTCGCGATAATGTGGGCAATCAGGTGCGACAATCTATCGATTGTATGG
GAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGA
TGGTCAGGCTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGAT
GATGCATGGTTACTCACCCTGCGATCCAGGGAAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTC
AGGTGAAAAATATTGTTGATGCGCTGGCAGTGTCTCGCGCCGTTGCATTGATTCTGTTTGTAAATTGTC
CTTTTAAACGGCGATCGCGTATTTCTGCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGGTGCG
AGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAGCTTTTGCC
ATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTGGACGAGGGGAAAT
TAATAGGTTGATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAAC
TGCCTCGGTGAGTTTTCTCCTTCAATTACAGAAACGGCTTTTCAAAAATATGGTATTGATAATCCTGATAT
GAATAAATTGCAGTTTCACTTGATGCTCGATGAGTTTTTCTAATCAAATAAAACGAAAGGCTCAGTCGAA
GACTGAGCCTTTCGTTTTAATCTGGA AAAACACCCTGGCGCTGCAGGTTCCAGATTCTCGGTT

Figure 15

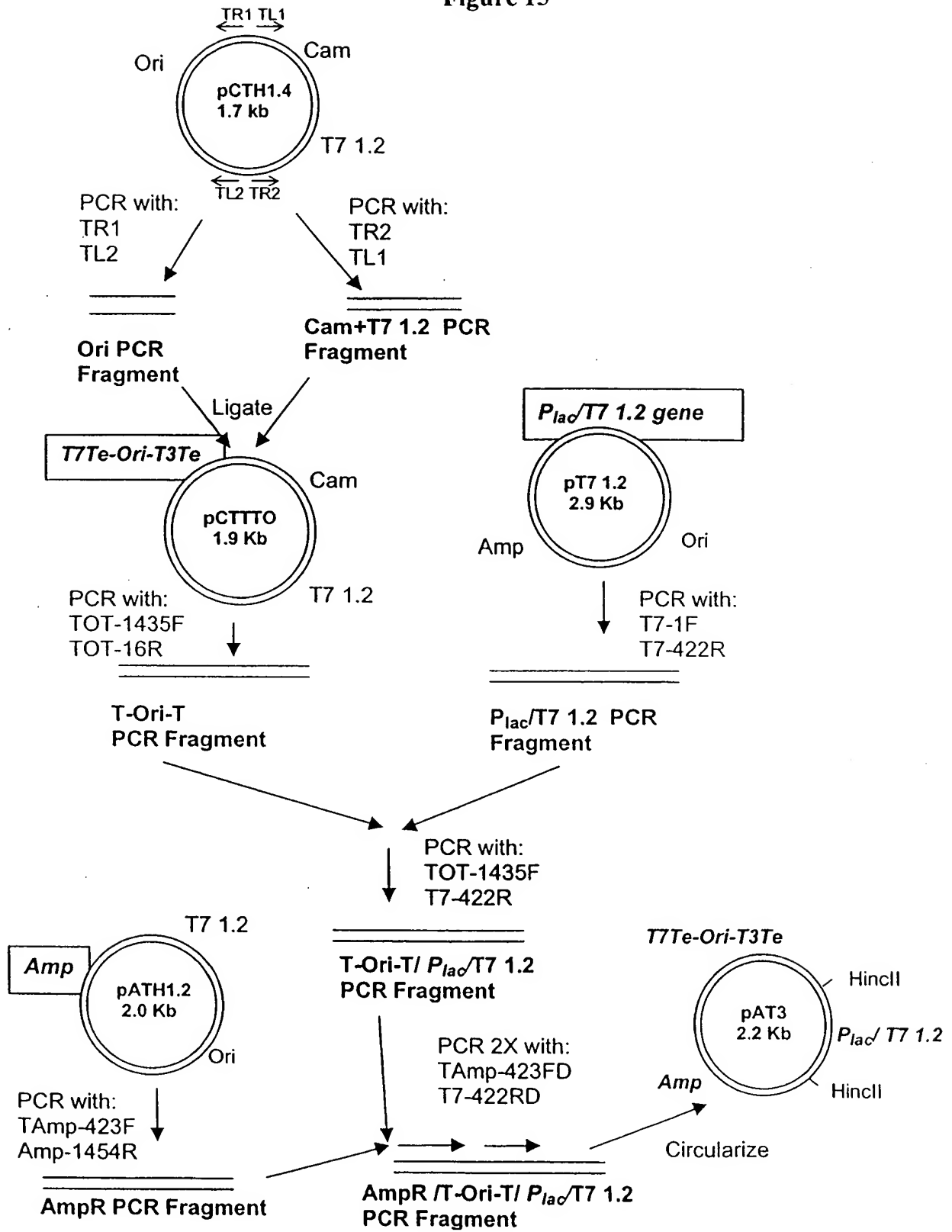


FIGURE 16

